

Table 4. Stocking history of Eagle Mountain Reservoir, Texas. Life stages are fry (FRY), fingerlings (FGL), advanced fingerlings (AFGL), and unknown (UNK). Life stages for each species are defined as having a mean length that falls within the given length range. For each year and life stage the species mean total length (Mean TL; in) is given. For years where there were multiple stocking events for a particular species and life stage the mean TL is an average for all stocking events combined.

Species	Year	Number	Life Stage	Mean TL (in)
Blue Catfish	1991	92,147	FGL	2.1
	Total	<u>92,147</u>		
Channel Catfish	1969	48,000	AFGL	7.9
	1970	60,000	AFGL	7.9
	1971	10,964	AFGL	7.9
	1972	9,000	AFGL	7.9
	1973	200	UNK	0.0
	1979	<u>10,095</u>	AFGL	7.9
	Total	<u>138,259</u>		
Florida Largemouth Bass	1988	333,148	FRY	1.0
	1993	373,642	FGL	1.0
	1994	148,628	FGL	1.1
	2000	232,424	FGL	1.1
	2006	425,660	FGL	1.6
	2007	426,963	FGL	1.5
	2014	427,802	FGL	1.7
	2015	<u>508,235</u>	FGL	1.8
	Total	<u>2,876,502</u>		
Green Sunfish x Redear Sunfish	1970	<u>8,000</u>		0.0
	Total	<u>8,000</u>		
Largemouth Bass	1969	300,000	UNK	0.0
	1971	100,000	UNK	0.0
	1978	<u>275</u>	UNK	0.0
	Total	400,275		
Mixed Largemouth Bass	1988	127,095		1.0
	Total	127,095		

Bluegill

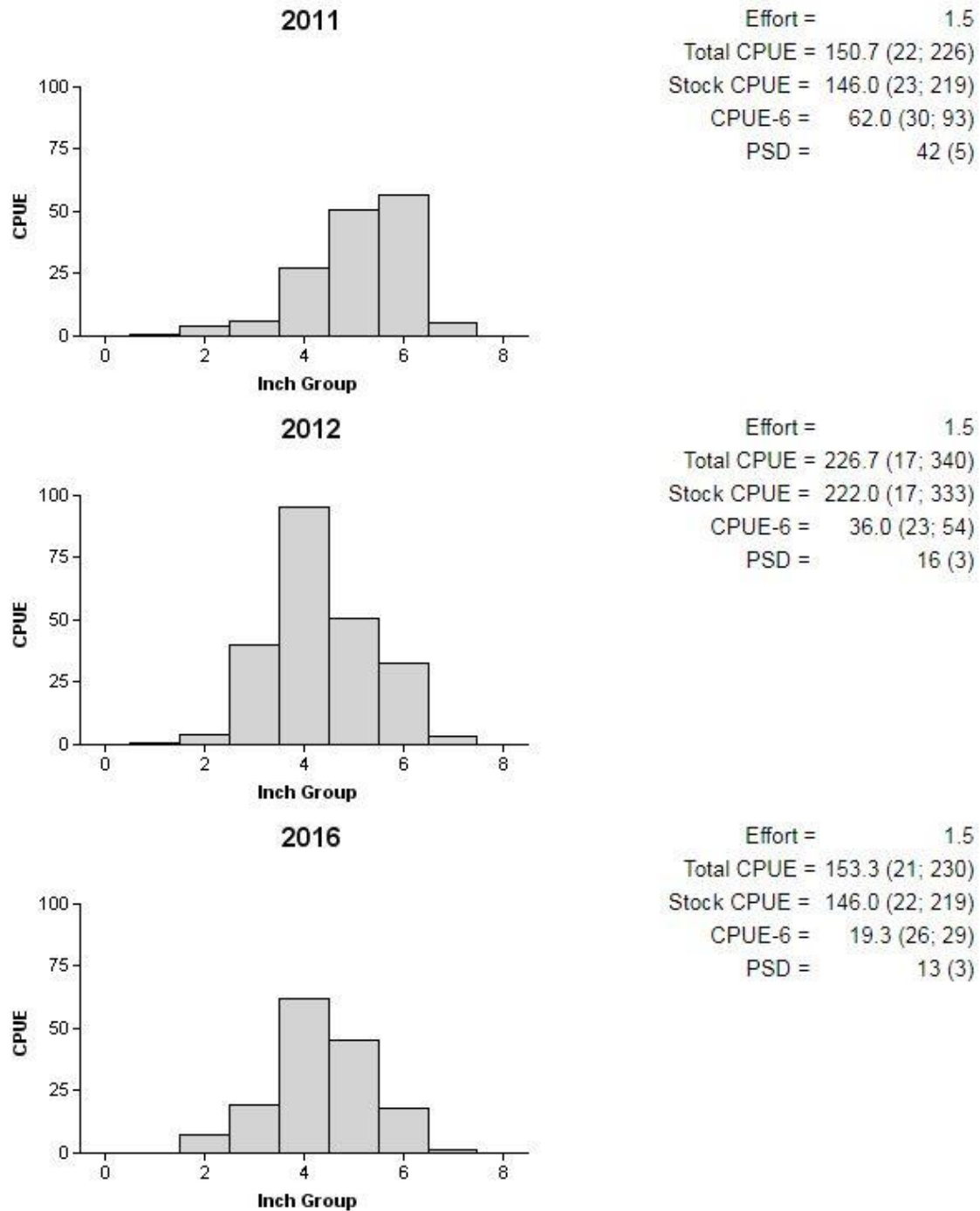


Figure 3. Number of Bluegill caught per hour (CPUE; bars) and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Eagle Mountain Reservoir, Texas, 2011, 2012, and 2016.

Blue Catfish

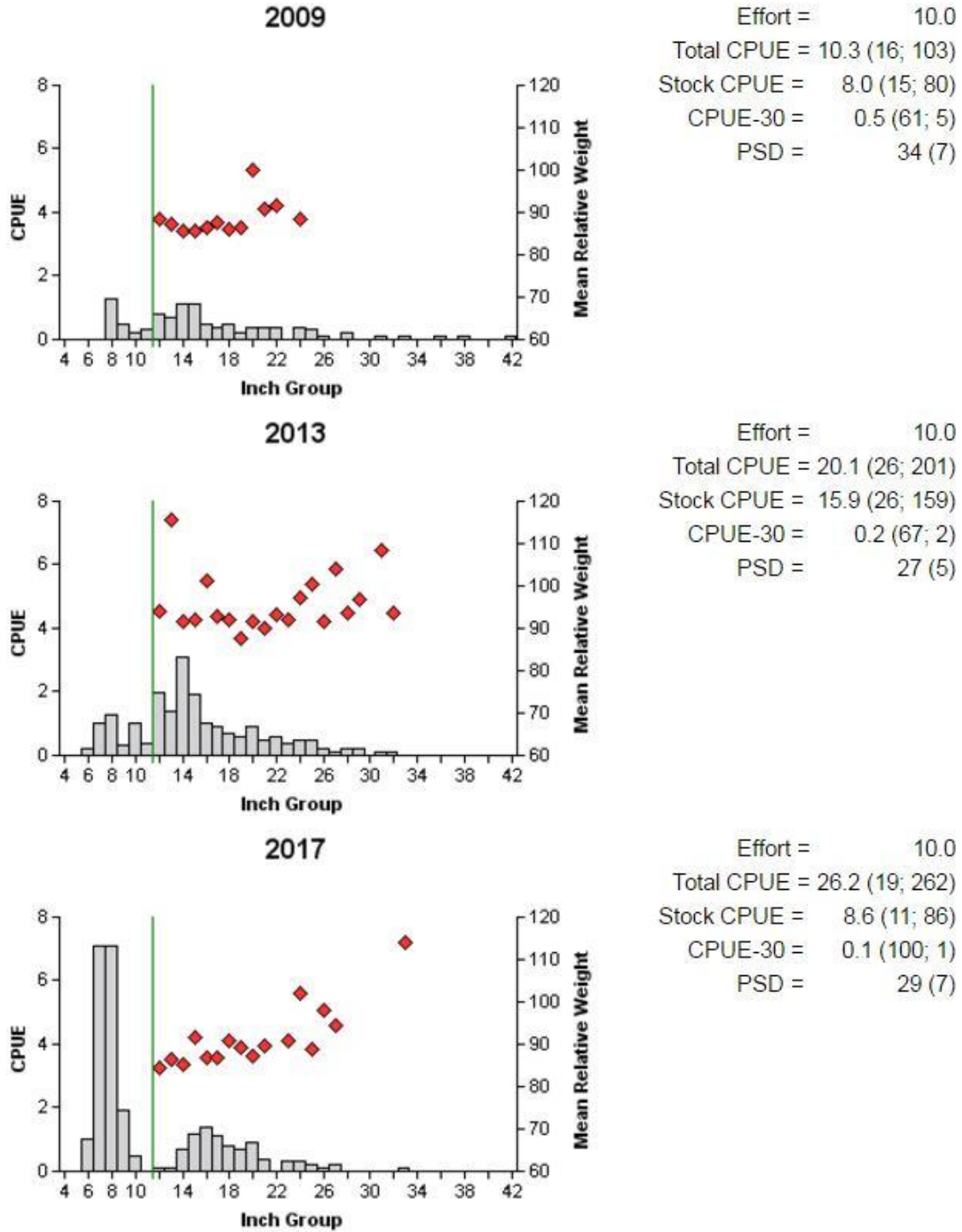


Figure 4. Number of Blue Catfish caught per net night (CPUE; bars) and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Eagle Mountain Reservoir, Texas, 2009, 2013, and 2017. Vertical line represents length limit at time of sampling.

Blue Catfish

Table 8. Creel survey statistics for Blue Catfish at Eagle Mountain Reservoir, Texas, from June 2016 through May 2017. Total catch per hour is for anglers targeting Blue Catfish and total harvest is the estimated number of Blue Catfish harvested by all anglers. Relative standard errors (RSE) are in parentheses. **[RSE for directed effort and total harvest is the same as directed effort/acre and total harvest/acre, respectively]**

Creel survey statistic	Year
	2016/2017
Surface area (acres)	8,504
Directed effort (h)	4,491.2 (30)
Directed effort/acre	0.5 (30)
Total catch per hour	1.1 (108)
Total harvest	782.9 (53)
Harvest/acre	0.1 (53)
Percent legal released	88.1

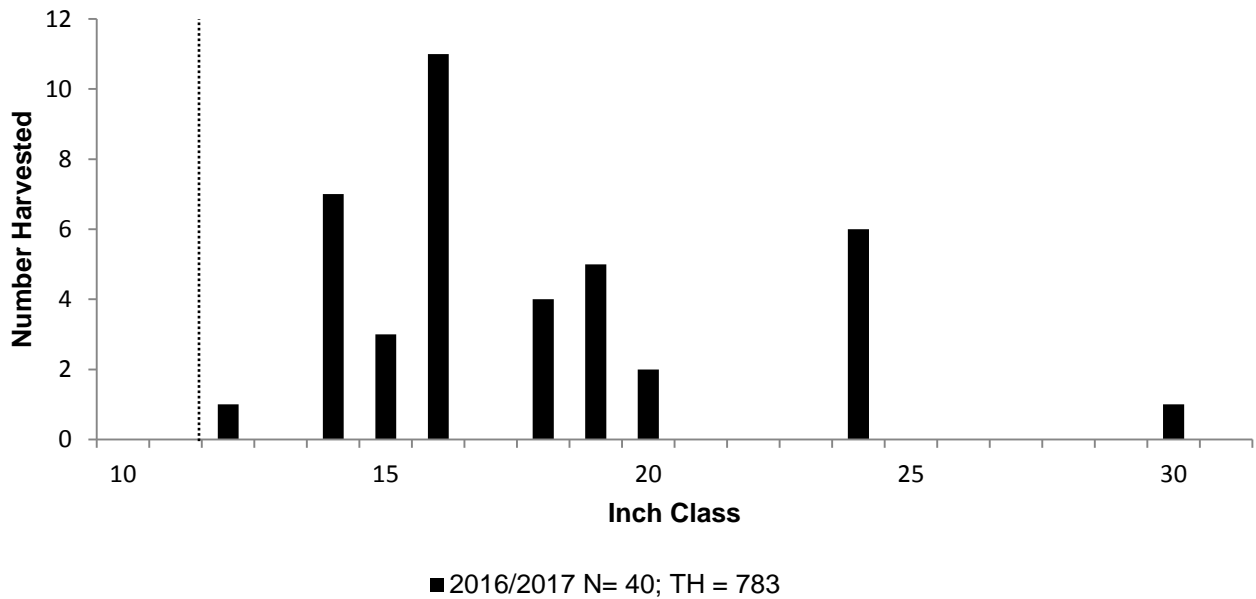


Figure 5. Length frequency of harvested Blue Catfish observed during creel surveys at Eagle Mountain Reservoir, Texas, June 2016 through May 2017, all anglers combined. N is the number of harvested Blue Catfish observed during creel surveys, and TH is the total estimated harvest for the creel period. Dashed line indicates minimum length limit at time of survey.

Channel Catfish

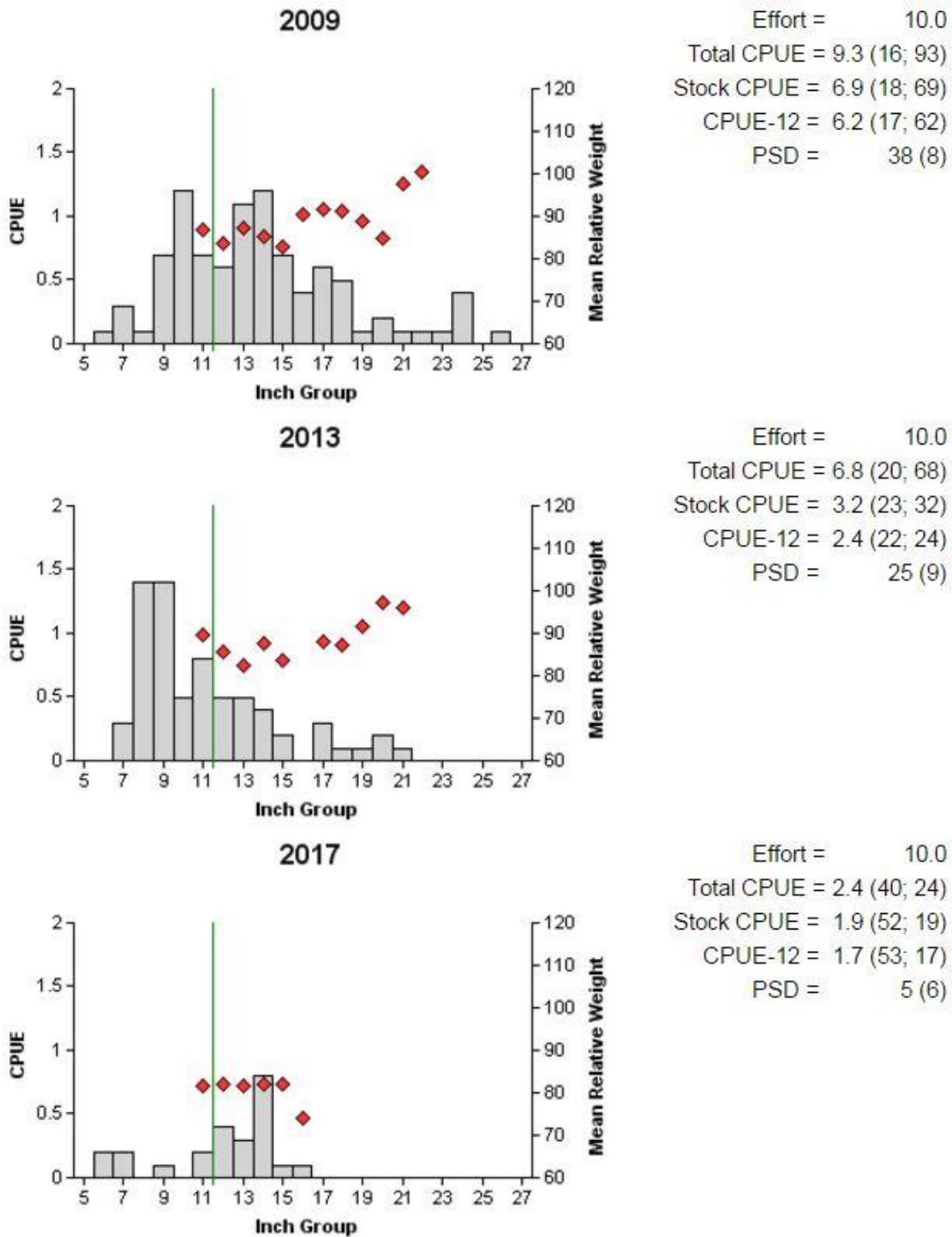


Figure 6. Number of Channel Catfish caught per net night (CPUE; bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Eagle Mountain Reservoir, Texas, 2009, 2013, and 2017. Vertical line represents length limit at time of sampling.

Channel Catfish

Table 9. Creel survey statistics for Channel Catfish at Eagle Mountain Reservoir, Texas, from June 2016 through May 2017. Total catch per hour is for anglers targeting Channel Catfish and total harvest is the estimated number of Channel Catfish harvested by all anglers. Relative standard errors (RSE) are in parentheses. **[RSE for directed effort and total harvest is the same as directed effort/acre and total harvest/acre, respectively]**

Creel survey statistic	Year
	2016/2017
Surface area (acres)	8,504
Directed effort (h)	689.05 (55)
Directed effort/acre	0.08 (55)
Total catch per hour	0.19 (100)
Total harvest	336.94 (84)
Harvest/acre	0.04 (84)
Percent legal released	28.4

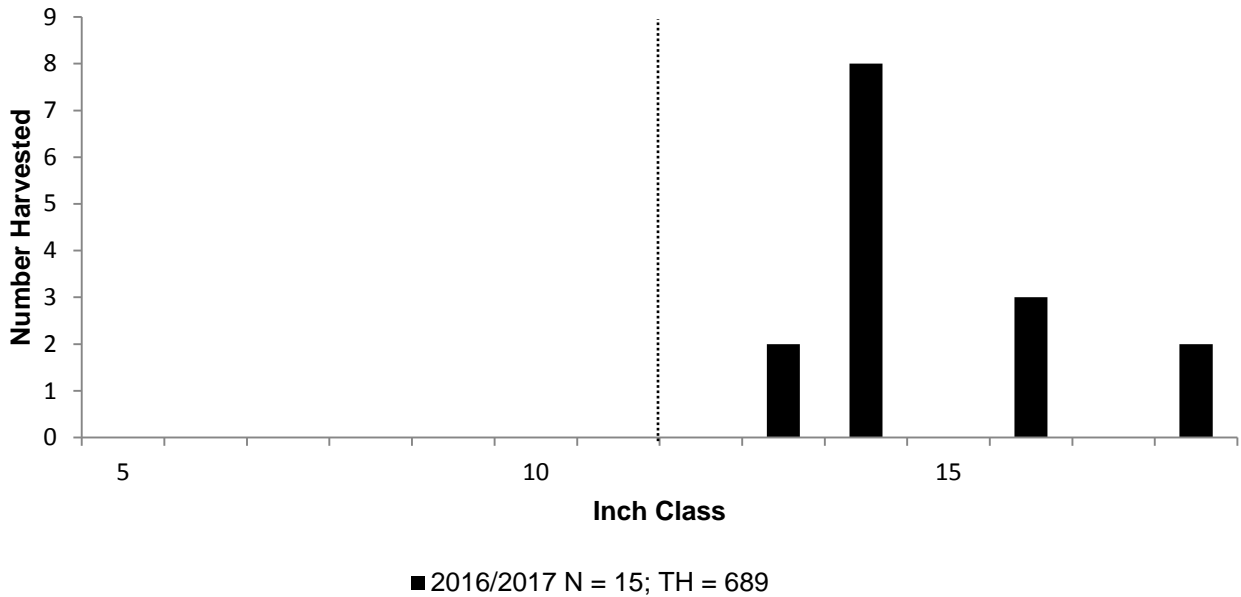


Figure 7. Length frequency of harvested Channel Catfish observed during creel surveys at Eagle Mountain Reservoir, Texas, June 2016 through May 2017, all anglers combined. N is the number of harvested Channel Catfish observed during creel surveys, and TH is the total estimated harvest for the creel period. Dashed line indicates minimum length limit at time of survey.

White Bass

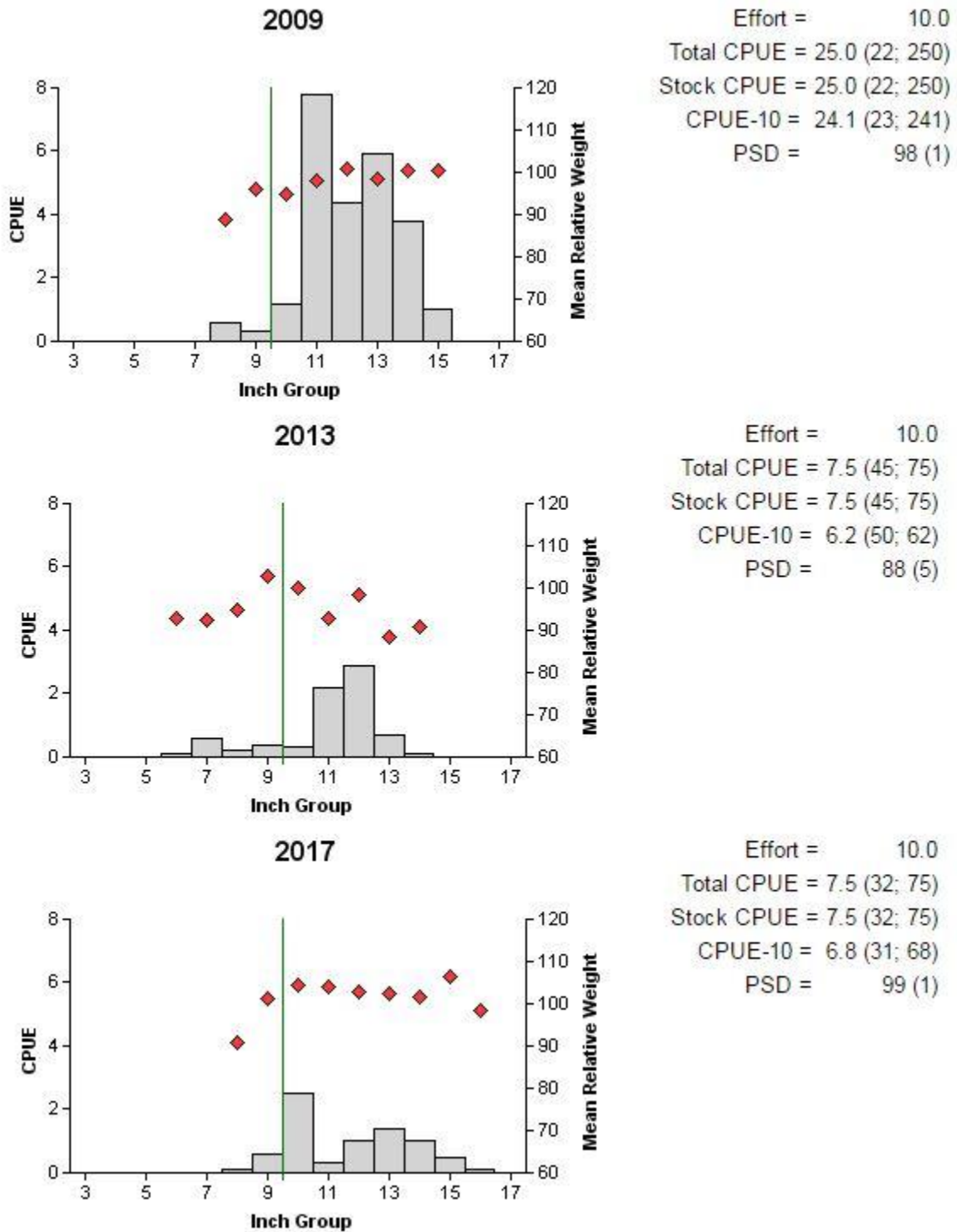


Figure 8. Number of White Bass caught per net night (CPUE; bars), mean relative weight (diamonds), and population indices (RSE and N are in parentheses) for spring gill net surveys, Eagle Mountain Reservoir, Texas, 2009, 2013, and 2017. Vertical line represents length limit at time of sampling.

White Bass

Table 10. Creel survey statistics for White Bass at Eagle Mountain Reservoir, Texas, from June 2016 through May 2017. Total catch per hour is for anglers targeting White Bass and total harvest is the estimated number of White Bass harvested by all anglers. Relative standard errors (RSE) are in parentheses. **[RSE for directed effort and total harvest is the same as directed effort/acre and total harvest/acre, respectively]**

Creel survey statistic	Year
	2016/2017
Surface area (acres)	8,504
Directed effort (h)	2,400.13 (35)
Directed effort/acre	0.28 (35)
Total catch per hour	0.59 (46)
Total harvest	560.54 (66)
Harvest/acre	0.07 (66)
Percent legal released	46.5

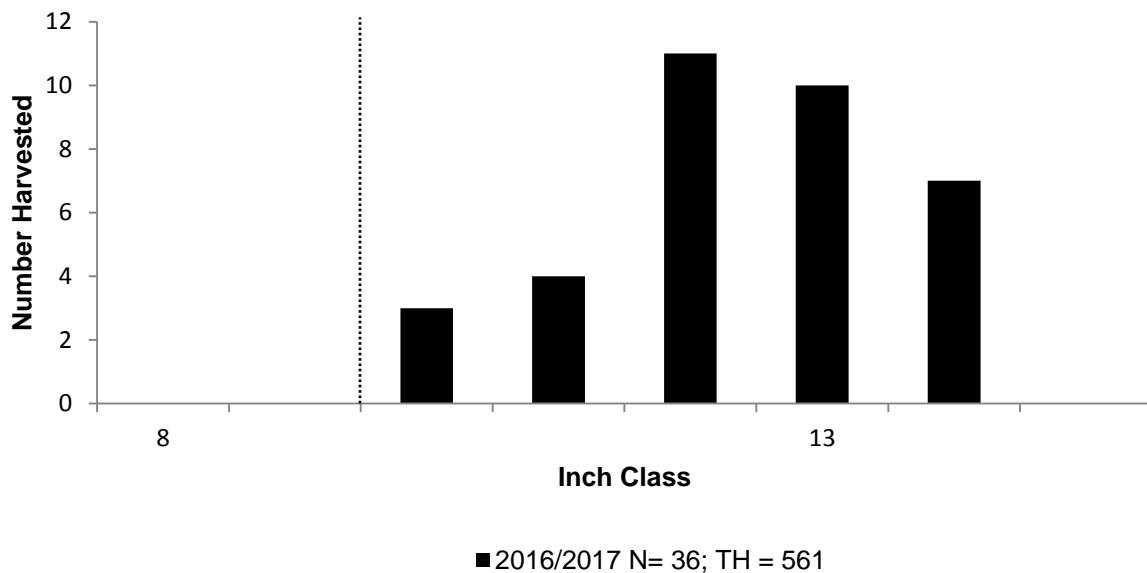


Figure 9. Length frequency of harvested White Bass observed during creel surveys at Eagle Mountain Reservoir, Texas, June 2016 through May 2017, all anglers combined. N is the number of harvested White Bass observed during creel surveys, and TH is the total estimated harvest for the creel period. Dashed line indicates minimum length limit at time of survey.

Spotted Bass

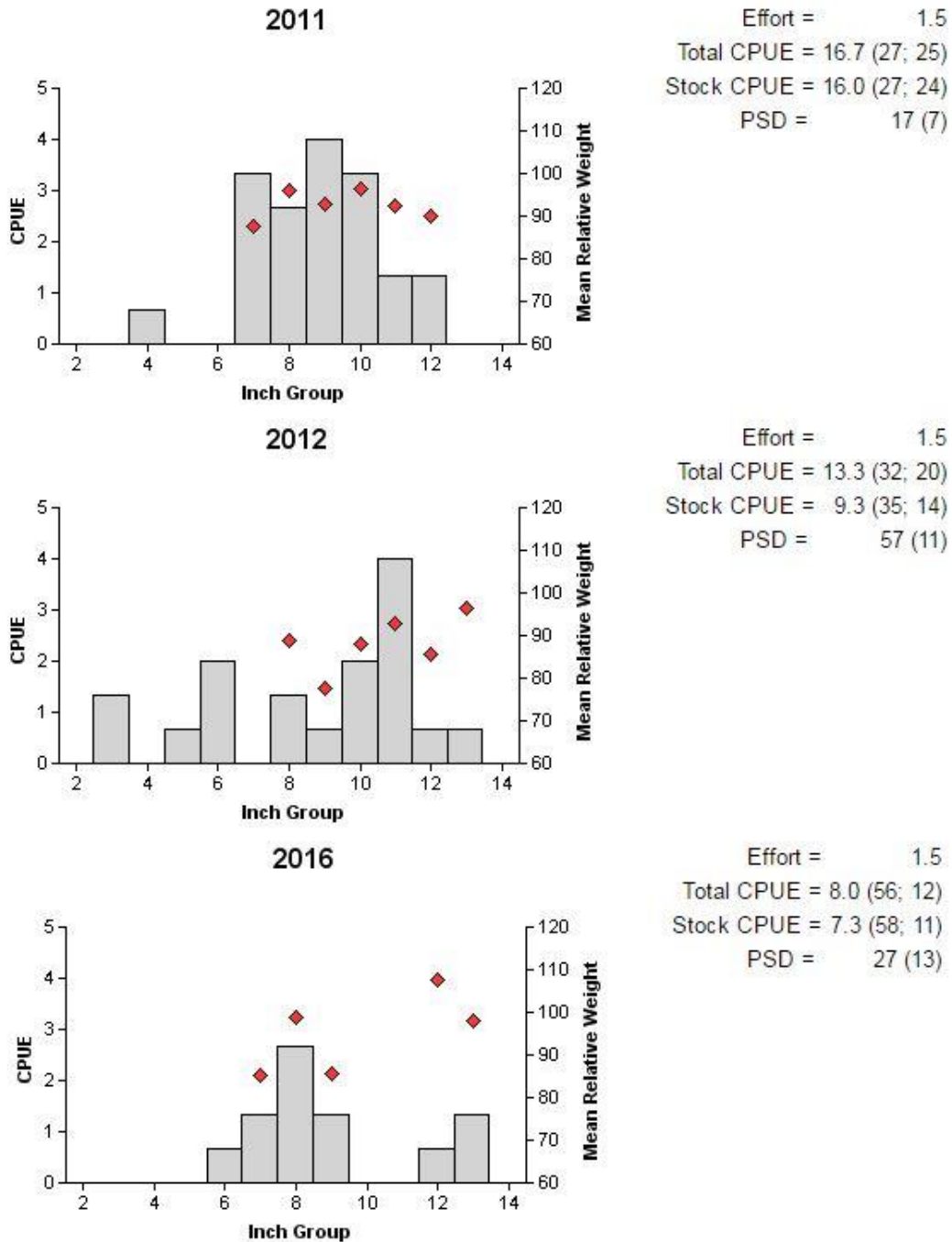


Figure 10. Number of Spotted Bass caught per hour (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Eagle Mountain Reservoir, Texas, 2011, 2012, and 2016.

Largemouth Bass

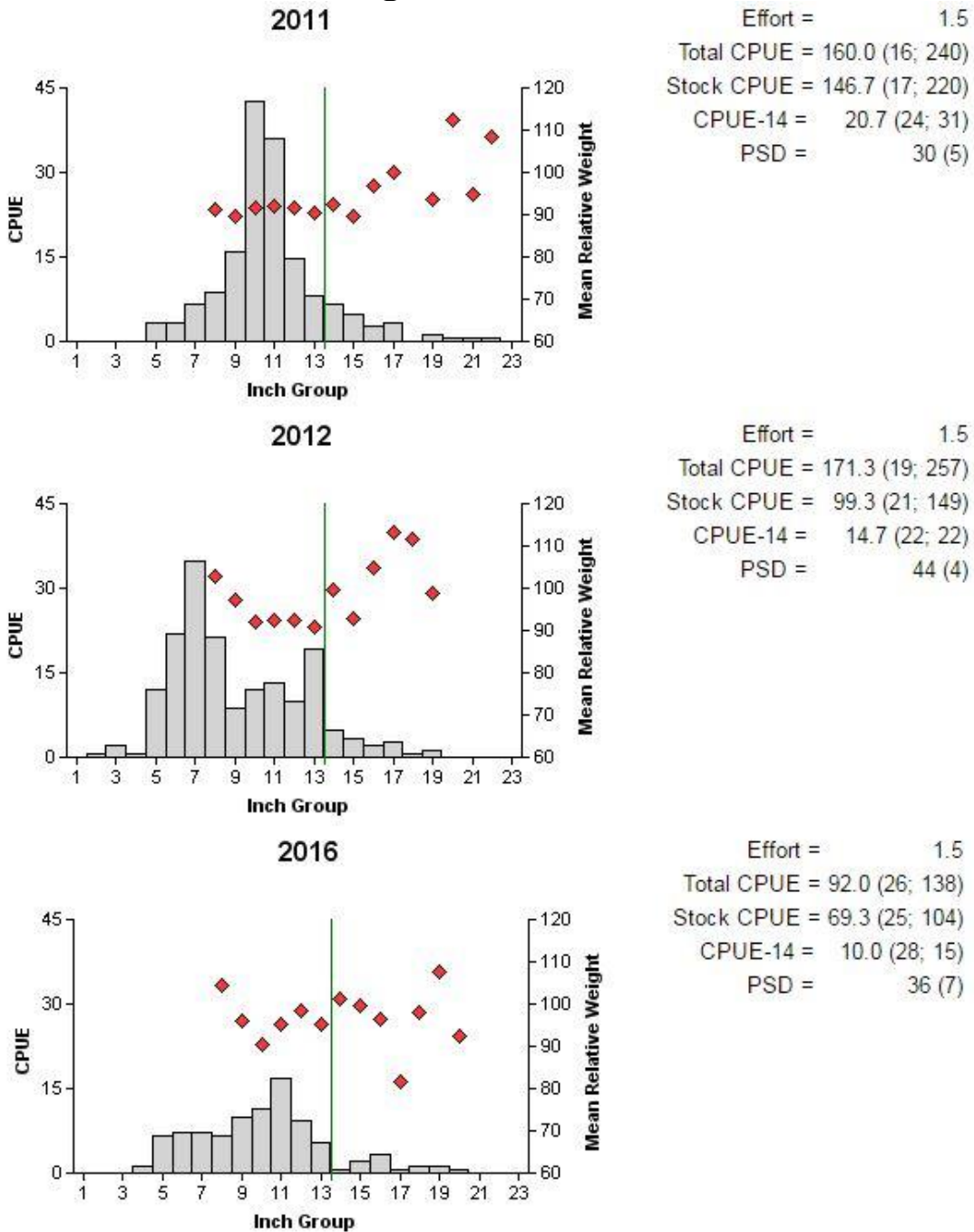


Figure 11. Number of Largemouth Bass caught per hour (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Eagle Mountain Reservoir, Texas, 2011, 2012, and 2016. Vertical lines represent length limit at time of sampling.

Largemouth Bass

Table 11. Creel survey statistics for Largemouth Bass at Eagle Mountain Reservoir, Texas, from June 2016 through May 2017. Catch rate is for all anglers targeting Largemouth Bass. Harvest is partitioned by the estimated number of fish harvested by non-tournament anglers and the number of fish retained by tournament anglers for weigh-in and release. The estimated number of fish released by weight category is for anglers targeting Largemouth Bass. Relative standard errors (RSE) are in parentheses. **[RSE for directed effort and total harvest is the same as directed effort/acre and total harvest/acre, respectively]**

Statistic	2016/2017
Surface area (acres)	8,504
Directed angling effort (h)	
Tournament	5,065.3 (31)
Non-tournament	20,723.3 (27)
All black bass anglers combined	25,788.6 (26)
Angling effort/acre	3.0 (26)
Catch rate (number/h)	0.7 (26)
Harvest	
Non-tournament harvest	509 (75)
Harvest/acre	0.06 (75)
Tournament weigh-in and release	503 (18)
Percent legal released (non-tournament)	90.7

Largemouth Bass

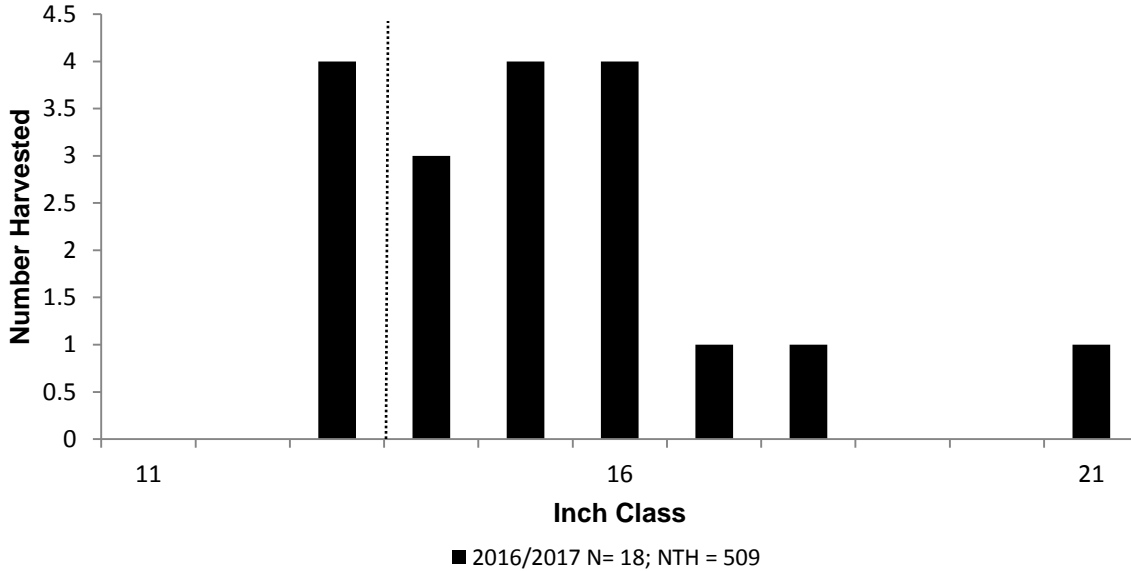


Figure 12. Length frequency of non-tournament harvested Largemouth Bass observed during creel surveys at Eagle Mountain Reservoir, Texas, June 2016 through May 2017, all anglers combined. N is the number of harvested Largemouth Bass observed during creel surveys, and NTH is the estimated non-tournament harvest for the creel period. Dashed line indicates minimum length limit at time of survey.

Table 12 Results of genetic analysis of Largemouth Bass collected by fall electrofishing, Eagle Mountain Reservoir, Texas, 2004, 2012, and 2016. FLMB = Florida Largemouth Bass, NLMB = Northern Largemouth Bass, Intergrade = hybrid between a FLMB and a NLMB. Genetic composition was determined by electrophoresis prior to 2005 and with micro-satellite DNA analysis since 2005.

Year	Sample size	Number of fish			% FLMB alleles	% FLMB
		FLMB	Intergrade	NLMB		
2004	30	1	21	8	29.2	3.3
2012	30	0	30	0	44.0	0.0
2016	30	1	28	1	43.0	3.3

Black Crappie

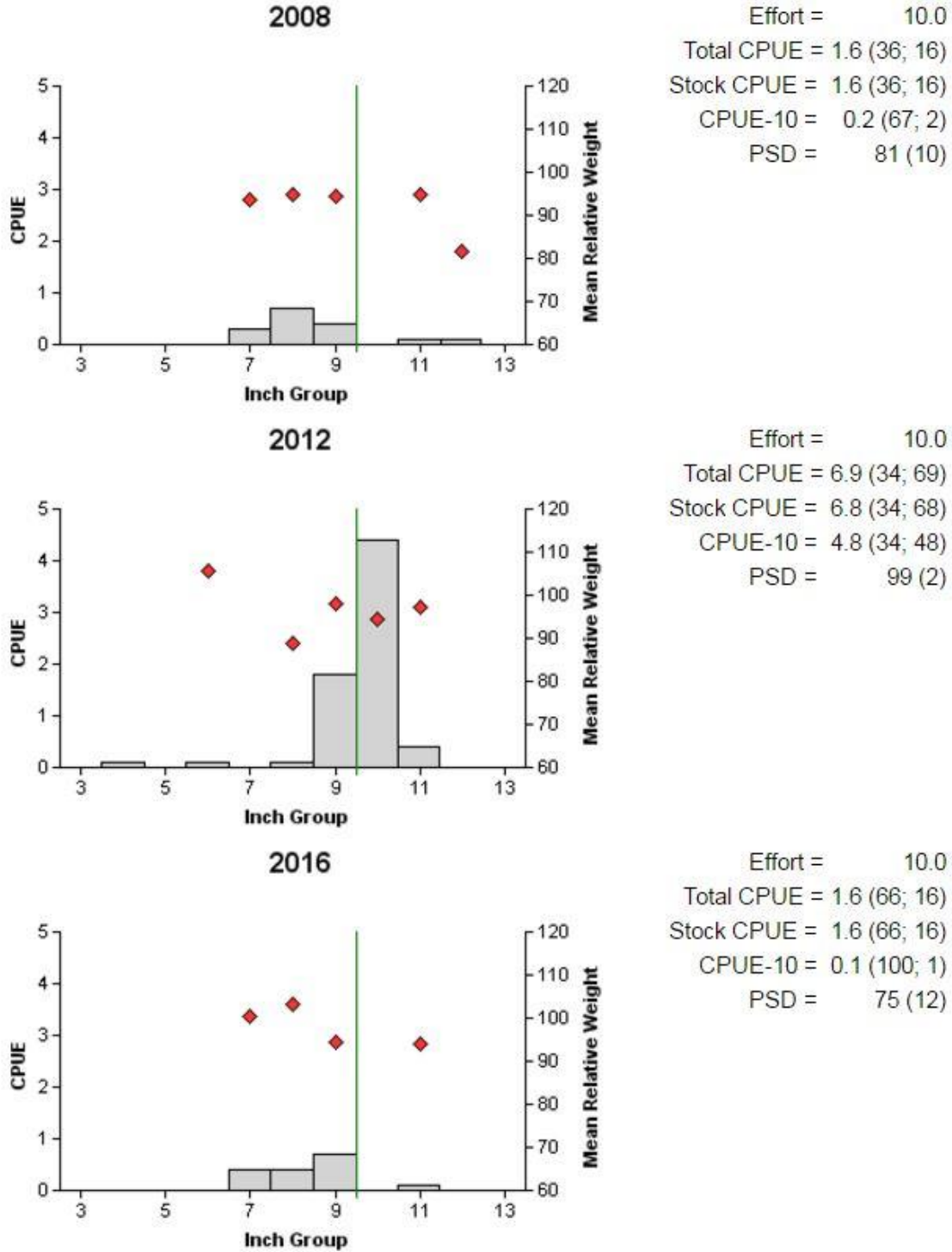


Figure 13. Number of Black Crappie caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall trap net surveys, Eagle Mountain Reservoir, Texas, 2008, 2012, and 2016. Vertical line represents length limit at time of sampling.

Crappie Species

Table 13. Creel survey statistics for Crappie (White Crappie and Black Crappie combined) at Eagle Mountain Reservoir, Texas, from June 2016 through May 2017. Total catch per hour is for anglers targeting Crappie and total harvest is the estimated number of Crappie harvested by all anglers. Relative standard errors (RSE) are in parentheses. **[RSE for directed effort and total harvest is the same as directed effort/acre and total harvest/acre, respectively]**

Creel Survey Statistic	Year
	2016/2017
Surface area (acres)	8,504
Directed effort (h)	351.6 (75)
Directed effort/acre	0.04 (75)
Total catch per hour	0.8 (NA)
Total harvest	45.4 (197)
Harvest/acre	>0.00 (197)
Percent legal released	0



Figure 14. Length frequency of harvested Crappie observed during creel surveys at Eagle Mountain Reservoir, Texas, June 2016 through May 2017, all anglers combined. N is the number of harvested Crappie observed during creel surveys, and TH is the total estimated harvest for the creel period. Dashed line indicates minimum length limit at time of survey.

Table 14. Proposed sampling schedule for Eagle Mountain Reservoir, Texas. Survey period is June through May. Gill netting surveys are conducted in the spring, while electrofishing and trap netting surveys are conducted in the fall. Standard survey denoted by S and additional survey denoted by A.

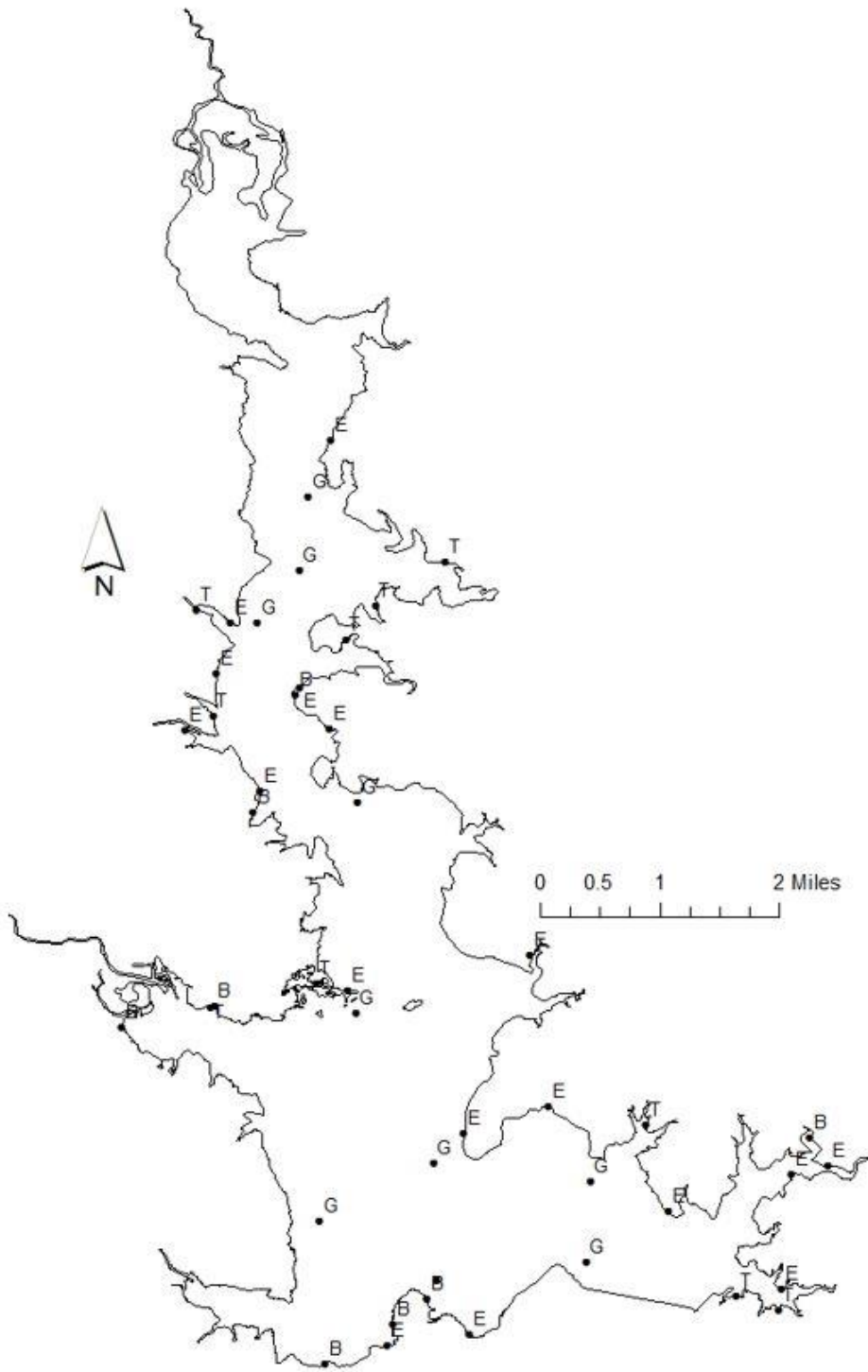
Survey year	Electrofishing Fall(Spring)	Low Frequency Electrofishing	Trapnet	Gillnet	Habitat			Creel survey	Report
					Structural	Vegetation	Access		
2017-2018									
2018-2019		A							
2019-2020									
2020-2021	S	A	S	S			S	S	

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APPENDIX A

Number (N) and catch rate (CPUE) and relative standard error (RSE) of all species collected from all gear types from Eagle Mountain Reservoir, Texas, 2016-2017. Effort for gill netting and trap netting was 10 net nights. Effort for electrofishing was 1.5 hours.

Species	Gill Netting			Trap Netting			Electrofishing		
	N	CPUE	RSE	N	CPUE	RSE	N	CPUE	RSE
Spotted Gar	1	0.1	100						
Longnose Gar	6	0.6	71						
Gizzard Shad	210	21.0	14				569	379.3	26
Threadfin Shad	1	0.1	100				1,579	1,052.7	27
Common Carp	3	0.3	71						
River Carpsucker	16	1.6	59						
Smallmouth Buffalo	78	7.8	27						
Blue Catfish	262	26.2	19						
Channel Catfish	24	2.4	40						
White Bass	75	7.5	32						
Yellow Bass	21	2.1	50						
Bluegill	3	0.3	100				230	153.3	21
Longear Sunfish							114	76.0	24
Redear Sunfish							2	1.3	100
Spotted Bass							12	8.0	56
Largemouth Bass							138	92.0	26
White Crappie				11	1.1	42			
Black Crappie	1	0.1	100	16	1.6	66			
Freshwater Drum	7	0.7	57						

APPENDIX B



Location of sampling sites, Eagle Mountain Reservoir, Texas, 2016-2017. Trap net, gill net, and electrofishing stations are indicated by T, G, and E, respectively. Boat ramps are indicated with a B. Water level was near full pool at time of sampling.

APPENDIX C

Historical catch rates of targeted species by gear type for Eagle Mountain Reservoir, Texas, for specified years.

Gear	Species	Year											
		1988	1990	1992	1995	1998	2000	2001	2002	2004	2005	2008	2009
Gill Netting (fish/net night)	Blue Catfish			0.0	0.9	0.6		0.9			7.9		10.3
	Channel Catfish	8.0	5.0	7.0	11.8	3.8		2.3			6.5		9.3
	White Bass	7.0	9.0	3.0	10.3	11.1		3.7			6.1		25.0
Electrofishing (fish/hour)	Gizzard Shad	214.0	291.0	328.7	274.0	589.3	711.3		500.5	437.4		506.0	497.3
	Threadfin Shad	387.0	37.0	155.3	115.3	579.3	670.0		107.3	528.7		633.3	342.0
	Bluegill	273.0	212.0	276.0	132.0	47.3	140.0		259.1	264.0		267.3	181.3
	Longear Sunfish	109.0	145.0	0.0	98.0	52.7	148.0		92.5	143.3		219.3	149.3
	Redear Sunfish	32.0	5.0	36.7	18.7	2.0	4.7		15.5	1.3		28.0	37.3
	Spotted Bass	25.0	21.0	54.7	48.0	42.0	18.7		30.4	21.3		31.3	13.3
	Largemouth Bass	173.0	110.0	222.7	150.0	93.3	105.3		64.9	116.0		142.0	96.0
Trap Netting (fish/net night)	White Crappie	4.0	9.0	4.8	1.4	3.4	3.2			3.7		0.9	
	Black Crappie	0.0	0.0	0.0	0.5	6.4	0.7			2.2		1.6	

Appendix C, continued.

Gear	Species	Year					Average	
		2010	2011	2012	2013	2016		2017
Gill Netting (fish/net night)	Blue Catfish				20.1		26.2	8.4
	Channel Catfish				6.8		2.4	6.3
	White Bass				7.5		7.5	9.0
Electrofishing (fish/hour)	Gizzard Shad	484.7	765.3	612.7		379.3		470.8
	Threadfin Shad	366.7	1156.0	1008.7		1052.7		510.0
	Bluegill	272.7	150.7	226.7		153.3		204.0
	Longear Sunfish	140.0	92.0	121.3		76.0		113.3
	Redear Sunfish	10.0	22.0	8.7		1.3		15.9
	Spotted Bass	12.0	16.7	13.3		8.0		25.4
	Largemouth Bass	211.3	160.0	171.3		92.0		136.3
Trap Netting (fish/net night)	White Crappie			0.6		1.1		0.9
	Black Crappie			6.9		1.6		2.0